



To whom it may concern,

Applicant, Jin young Kim, for a numerous years, has pursued his studies on ideal and practical designs of hair coloring applicators. Although he submitted an application titled "Nozzle Comb" on July 8, 2002, his application has not been granted a patent by the U.S. Patent Department because Patent Department has neglected to look at hair fluids' general components and tendency, and focused only on applicator's appearance.

I have tested various patented applicators by applying various coloring creams and fluids to duplicated applicators. In this experiment, I found one disturbing fact that fluid dispersing holes were frequently blocked by solidified fluids. Through my research, I concluded that the quick solidification of hair fluid is mainly due to the large glue component of hair fluid.

General Components of Hair Coloring Fluid

1. Lacquer- Hair fluid contains about 6% of natural lacquer extract that lacquer extract allows dye to penetrate into hair.
2. Coloring Matter- Hair fluid contains about 10% of this component
3. Glue- Hair fluid contains about 84% of glue.

Crucial role of Glue in determining applicator's practicality

-Glue does not solidify in the absence of air. However, once it is exposed to air, glue's water component quickly evaporates into air through a process of oxidation. After glue completes its solidification, it becomes very difficult to wash the glue out.

-Even if very small amount of glue component remains at the fluid dispersing holes, glue's solidification will seal those openings. Unless those glue seals are removed, it is virtually impossible to use the applicator again.

-All of patented fluid applicators carry this defect that their designs do not allow an easy access of cleansing devices to enter and remove remaining glue components after usage.

I hereby request the examiner to please take above materials to his/her consideration.

9/29/05

Sincerely,

Jin Young Kim



Application Title: Nozzle Comb

Application Number: 10/612778

Applicant: Jin Young Kim

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Explanation

Claim 1: Because coloring fluid consists mainly of glue, I designed my invention in such way that the process of fluid dispersing is more efficient and less time-consuming than other applicators. Each individual tooth is cut open parallel to tooth's height that the slot measures from 3/10 of tooth's height to the end of the tip, enabling 180 degrees to 360 degrees fluid dispersing.

Claim 2: If time spent on coloring elongates, the heat produced from head and oxidation quickly solidify the mixture. Therefore, I structured the teeth in three layers of a zigzag layout to reduce this time consuming process. With such design, one combing of this applicator is much more efficient than three combing of one layered applicators. First, each individual tooth of my applicator disperses more fluid than others in a given time. Second, one combing coats same hair three times that it is much less-time consuming and much more convenient than running an applicator three times.

Comparison with other patents

- A. U.S. 5.937.865, Dhaliwal- Drawing Fig 2 and Fig4 show that although his placement of opening is similar, opening's shape (hole) and its function are completely different from that of my invention.

(For reference- see Fig 2, Fig3, Fig5, Fig7, Fig9, Fig10, and Fig11 of my application)

- B. U.S. 6.260.557, Yarbrough- After examining Fig5-4a, Fig6-4b, Fig7-4c, and Fig8, I found them irrelevant to my invention.

C. U.S. 6,457,476, Emer- I arrived at same conclusion after examining Fig7, Fig8 and Fig11 of the application.

D. U.S. 6,460,546, Sofer- After examining Fig5A-A2, Fig2-20, Fig3-20, Fig2-18, and Fig3-18, I concluded that the slot is spatially limited to the tip of a tooth.

* An opening in my application covers 70% of the height of the tooth.

(For Reference: see Fig2, Fig4, Fig5, Fig6, Fig7, and Fig 10)